

REMARKS

The Office Action issued October 29, 2002 has been carefully considered and this Amendment prepared in response. Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and the following remarks.

Claims 1 and 7 are amended. After amending the claims as set forth above, claims 1-11 are now pending in this application.

The Examiner is respectfully requested to initial reference A-5 on the form 1449 and to forward to the undersigned a copy of the so-initialed document with the next Office Action on this application.

In the Office Action, the second paragraph on page 5 was objected to under 35 U.S.C. § 112, claims 1-9 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite, and claims 1, 5 and 9 were rejected under 35 U.S.C. § 102(b) as being anticipated by European Patent application 561 001 A1 to Ishibe. These rejections are respectfully traversed. Applicants note with appreciation the Examiner's statements that claims 2-4 and 6-9 would be allowable if rewritten to overcome rejections under 35 U.S.C. § 112 and to include the limitations of base and intervening claims, and that claims 10 and 11 would be allowable if rewritten to overcome rejections under 35 U.S.C. § 112 set forth in the Office Action.

Specification Has Been Amended To Overcome The Objection

The Office Action objected to the second paragraph on page 5 under 35 U.S.C. § 112, first paragraph for not describing the subject matter in such a way as to enable one skilled in the art to make or use the invention since reference was made to a British patent. The sentence objected to stated that a woven web was produced using a rando-feeder, and then referred to the British publication. In response, the second paragraph on page 5 is amended to explain how drawn steel fibers are formed into a web by feeding them to a rando-feeder apparatus. Thus, the sentence discloses the same fabrication step and the same apparatus as previously disclosed. Since rando-feeder devices (and their method of operation) are well known in the art as machines

that form webs from fibers, as can be confirmed by a web search on the term "rando-feeder," the amended paragraph fully discloses to one skilled in the art a method for forming a web from drawn steel fibers. Further, since the original paragraph fully disclosed use of a rando-feeder to form a web and referred to a British publication that would be known to one skilled in the art, the amendment does not add new matter.

Claims 1 and 7 Have Been Amended To Overcome Rejections under 35 U.S.C. § 112

Claim 1 has been amended to provide proper antecedent basis for the terms "the filter inlet side" and "the filter outlet side." Applicants respectfully submit that this amendment resolves the antecedent basis rejections for claims 1-9 regarding these terms, and withdrawal of the rejections of these claims under 35 U.S.C. § 112 is requested.

Claim 7 has been amended to clarify what is being compared, provide proper antecedent basis and clarify the description of the term "diameter". (It is noted that in the Office Action claim 4 was rejected under 35 U.S.C. § 112 for these problems, however it is obvious from the rejection that the Examiner meant claim 7 which contains the objected to terms and comparison.) Applicants respectfully submit that this amendment resolves the basis for the rejection of claim 7, and withdrawal of the rejection of this claim under 35 U.S.C. § 112 is requested.

Applicants point out that reference characters have been retained in the claim, but that such characters have no effect on claim scope. MPEP 608.01(m).

Rejections of Claims 1, 5 and 9 Under 35 U.S.C. § 102(b) Are Traversed

Applicants respectfully disagree that the Ishibe reference anticipates claims 1, 5 and 9, because that reference does not disclose all of the structure recited in those claims. Specifically, Ishibe teaches that a layered filtering structure may comprise a support layer and a particle layer. The support layer may comprise metal powder, or may comprise a sintered body of short or long fibers (p.5, lines 15-39). Regarding the particle layer, Ishibe teaches only particle layers comprising metal powder or short fibers (p. 5, line 57). Thus, Ishibe teaches that the second filter layer is to be a particle layer, and does not teach or suggest that either layer be a web of metal fibers.

In contrast, claim 1 recites that each layer comprises "a web of metal fibers." One skilled in the art would understand that a web of metal fibers is a significantly different structure than a particle layer, even a particle layer comprised of particles, powder or short fibers. Further, to one skilled in the art it is clear from the term "web of metal fibers" that the term "web" means an assemblage of long metal fibers since powders, particles and short metal fibers will not sufficiently overlap to form a web or net structure.

Since claim 1 recites structure that is not taught or suggested in Ishibe, Applicants respectfully submit that the claim is allowable over that reference. Therefore, withdrawal of the rejection of claim 1 under 35 U.S.C. § 102(b) is respectfully requested.

Since claims 5 and 9 depend from claim 1, Applicants respectfully submit that these claims are also allowable over the Ishibe reference, and withdrawal of the rejections of these claims under 35 U.S.C. § 102(b) are also requested.

Claims 10 and 11 Are In Condition For Allowance

As noted above, the Examiner stated that claims 10 and 11 would be allowable if the rejections under 35 U.S.C. § 112 set forth in the Office Action are resolved. As discussed above, the objection to the specification under 35 U.S.C. § 112 is resolved by the amendment provided herein. No other objection or rejection under 35 U.S.C. § 112 set forth in the Office Action applies to the terms used in claims 10 and 11. Accordingly, Applicants respectfully submit that claims 10 and 11 are in condition for allowance.

Applicant believes that with incorporation of the amendments provided above the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

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MARKED UP VERSION SHOWING CHANGES MADE

Below is the marked up amended specification paragraph from page 5, lines 3 – 10:

Steel fibers with a diameter of 2 μm are obtained by means of the technique of bundled drawing, such as described[, e.g.,] in US-A-3,379,000. [A first non-woven web is then produced by means of] The bundled drawn steel fibers are delivered to a_rando-feeder apparatus. The rando-feeder apparatus transforms the steel fibers into a web. In an alternative embodiment, the drawn steel fibers may be individualized to some extent before being delivered to the rando-feeder apparatus, such as by a carding operation. [which is disclosed e.g. in GB 1 190 844.] The web is then sintered separately and compacted by means of a cold isostatic pressing operation carried out at a pressure higher than 2000 bar to obtain a porosity lower than 55 %, e.g. lower than 50 %, e.g. 46 %. This results in the first layer 12.

Below are the marked up amended claim(s):

1. (Amended) A layered filtering structure (10) having a filter inlet side and a filter outlet side, said layered filtering structure (10) comprising at least a first layer (12) and a second layer (13), each layer comprising a web of metal fibers which has been sintered, said two layers (12, 13) being in contact with each other, wherein said first layer, most close to the filter inlet side has a porosity below 55%, and wherein said second layer, closer to the filter outlet side has a porosity which is at least 20% greater than the porosity of said first layer.

7. (Amended) A structure according to claim 1, wherein said structure is sandwiched between a first wire net (14) and a second wire net (15), said first wire net comprising wires having a diameter d1, said second wire net comprising wires having a diameter d2, said first net (14) being located at the inlet side, said second wire net (15) having meshes and being located at the outlet side, said first wire net

having meshes which are smaller than the meshes of the second wire net and the diameter d1 of the wires of the first wire net being thicker than the diameter d2 of the wires of the second wire net.